L Number	Hits	Search Text	DB	Time stamp
-	645	(427/68 or 313/49? or 445/24) and phosphor with conductive	USPAT	2003/08/01 11:56
-	0	(427/68 or 313/49? or 445/24) and phosphor with conductive with carbonate	USPAT	2003/08/01 12:14
-	16	(427/68 or 313/49? or 445/24) and phosphor with carbonate	USPAT	2003/08/01 12:04
-	5	(427/68 or 313/49? or 445/24) and phosphor with conductive near3 binder	USPAT	2003/08/01 12:05
-	16	(427/68 or 313/49? or 445/24) and phosphor with "carbonate)"	USPAT	2003/08/01 12:17
-	29	(Fluorescent or phosphor) with conductive near3 binder	USPAT	2003/08/01 12:36
-	41	binder same (sodium or strontium or manganese or potasium or lithium or calcium or barium) near4 carbonate with conducti$2	USPAT	2003/08/01 13:15
-	1	phosphor same binder with (tin near2 2-ethylhexanoate or tin near2 isopropoxide or tin near2 oxalate or titanium near2 ethoxide or zinc near3 (dionate or acetate or oxalate))	USPAT	2003/08/01 13:22
-	179	phosphor same binder with (polyvinyl adj alcohol or potassium adj silicate or ammonium adj silicate)	USPAT	2003/08/01 13:25
-	16	(phosphor same binder with (polyvinyl adj alcohol or potassium adj silicate or ammonium adj silicate)) and field adj emission	USPAT	2003/08/01 14:09
-	4	phosphor same (standard or common or well adj known) with binder with (polyvinyl adj alcohol or potassium adj silicate or ammonium silicate)	USPAT	2003/08/01 14:26

L Number	Hits	Search Text	DB	Time stamp
1	645	(427/68 or 313/49? or 445/24) and phosphor with conductive	USPAT	2003/08/01 11:56
2	0	(427/68 or 313/49? or 445/24) and phosphor with conductive with carbonate	USPAT	2003/08/01 12:14
3	16	(427/68 or 313/49? or 445/24) and phosphor with carbonate	USPAT	2003/08/01 12:04
4	5	(427/68 or 313/49? or 445/24) and phosphor with conductive near3 binder	USPAT	2003/08/01 12:05
5	16	(427/68 or 313/49? or 445/24) and phosphor with "carbonate)"	USPAT	2003/08/01 12:17
9	29	(Fluorescent or phosphor) with conductive near3 binder	USPAT	2003/08/01 12:36
25	41	binder same (sodium or strontium or manganese or potasium or lithium or calcium or barium) near4 carbonate with conducti$2	USPAT	2003/08/01 12:57

L Number	Hits	Search Text	DB	Time stamp
-	0	(427/68 or 313/49? or 445/24) and phosphor with conductive with carbonate	USPAT	2003/08/01 12:14
-	16	(427/68 or 313/49? or 445/24) and phosphor with carbonate	USPAT	2003/08/01 12:04
-	5	(427/68 or 313/49? or 445/24) and phosphor with conductive near3 binder	USPAT	2003/08/01 12:05
-	16	(427/68 or 313/49? or 445/24) and phosphor with "carbonate)"	USPAT	2003/08/01 12:17
-	1	"5744907" and carbonate$1	USPAT	2003/08/01 12:19
-	29	(Fluorescent or phosphor) with conductive near3 binder	USPAT	2003/08/01 12:36
-	598	(sodium or strontium or manganese or potasium or lithium or calcium or barium) near4 carbonate with conducti$2	USPAT	2003/08/01 12:57
-	41	binder same (sodium or strontium or manganese or potasium or lithium or calcium or barium) near4 carbonate with conducti$2	USPAT	2003/08/01 13:15
-	1	phosphor same binder with (tin near2 2-ethylhexanoate or tin near2 isopropoxide or tin near2 oxalate or titanium near2 ethoxide or zinc near3 (dionate or acetate or oxalate))	USPAT	2003/08/01 13:22
-	230	phosphor same binder with (polyvinyl adj alcohol or potassium adj silicate or ammonium silicate)	USPAT	2003/08/06 08:01
-	179	phosphor same binder with (polyvinyl adj alcohol or potassium adj silicate or ammonium adj silicate)	USPAT	2003/08/01 13:25
-	16	(phosphor same binder with (polyvinyl adj alcohol or potassium adj silicate or ammonium adj silicate)) and field adj emission	USPAT	2003/08/01 14:09
-	4	phosphor same (standard or common or well adj known) with binder with (polyvinyl adj alcohol or potassium adj silicate or ammonium silicate)	USPAT	2003/08/01 14:26

US-PAT-NO: 4568479

DOCUMENT-IDENTIFIER: US 4568479 A

TITLE: Method for preparing phosphor adapted for producing photosensitive layers from an acid slurry

---------- KWIC ---------

US Patent No. - PN (1):
4568479

Brief Summary Text - BSTX (3):

The slurry-direct photographic process is described in U.S. Pat. Nos. 3,406,068 to H. B. Law, 3,313,643 to P. B. Branin, and 3,269,838 to T. A. Saulnier, for example. In the common practice of that process, an aqueous slurry is prepared containing the desired particulate phosphor; a water-soluble, photosensitizable binder for the phosphor, such as polyvinyl alcohol; and a water-soluble dichromate photosensitizer for the binder. The slurry is coated on the inner surface of the viewing window of the tube and then dried, producing the photosensitive layer. The dry photosensitive layer is exposed to a pattern of actinic radiation to insolubilize or harden selected areas of the layer. The exposed layer is then flushed with water to remove the
unhardened areas of the layer, while retaining the insoluble, hardened areas of the layer in place, thereby producing the desired screen structure.

US-PAT-NO: 4680231

DOCUMENT-IDENTIFIER: US 4680231 A

TITLE: Low-velocity electron excited phosphor

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US Patent No. - PN (1):
4680231

Detailed Description Text - DETX (4):
20 g of a powdery In.sub.2 O.sub.3 conductive material was mixed with 80 g
of 1.25% polyvinyl alcohol aqueous solution which is water-soluble polymer acting as an organic binder to prepare a mixture, and the mixture was then water-ground in a ball mill to form dispersion in which fine particles of In.sub.2 O.sub.3 having an average particle size of 0.3 .mu.m were dispersed.

15 g of the dispersion thus formed was added to 27 g of a powdery ZnS:Cu,Al
phosphor material to form a mixture, which was uniformly blended to form a slurry. Subsequently, the slurry was added to a mixed solvent of 120 ml of butyl acetate and 180 ml of acetone which are non-solvents of the polyvinyl alcohol aqueous solution for a period of 10-20 seconds while stirring. This resulted in water which is a solvent component of the polyvinyl alcohol being dissolved into butyl acetate and acetone to cause the polyvinyl alcohol to fall into a dehydrated state. The fine In.sub.2 O.sub.3 particles dispersed in the polyvinyl alcohol aqueous solution was deposited on the surface of the phosphor
material in the form of particles using the polyvinyl alcohol as a binder and

then precipitated. The phosphor material thus formed having the conductive material deposited thereon was subjected to filtration under reduced pressure and recovered.

Claims Text - CLTX (7):

4. Low-velocity electron excited phosphor as defined in claim 3 wherein said organic binder is polyvinyl alcohol or methyl cellulose.

US-PAT-NO: 4717590

DOCUMENT-IDENTIFIER: US 4717590 A

TITLE: Process for binding pigment particles to phosphor particles

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US Patent No. - PN (1):
4717590

Brief Summary Text - BSTX (7):
U.S. Pat. No. 4,473,634 describes an inorganic binder system which uses water glass (potassium silicate) as the binder. However, the drawbacks in this process are that the waterglass binder is slurried with the phosphor and pigment and then dried into a hard mass which must be ground back into a fine powder. The grinding process is labor intensive and results in poor material efficiency due to large amounts of undersize particles resulting from the grinding process.

US-PAT-NO: 5073463

DOCUMENT-IDENTIFIER: US 5073463 A

TITLE: Method of manufacturing a phosphor screen for cathode ray tubes

---------- KWIC ---------

US Patent No. - PN (1):
5073463

Brief Summary Text - BSTX (6):
According to the PVA slurry method, phosphor particles are suspended in an
aqueous solution, which contains a photosensitive resin, such as ammonium bichromate or the like, a dispersing agent (surface active agent) and a binder, such as polyvinyl alcohol or the like, to thereby produce a so-called phosphor slurry. Then, the phosphor slurry is coated on the inner wall of a cathode ray tube, namely, the inner surface of its panel, which already has formed thereon a light absorption layer, for example a carbon stripe. After the phosphor slurry has been dried, it is then exposed to light by using a color selection electrode (for example, aperture grill) as an optical mask. After the exposing process, the color selection electrode is removed and the product is developed
by water, thereby forming phosphor stripes of a predetermined pattern to thus form a phosphor screen on the inner surface of the panel. In general, the similar processes are sequentially repeatedly carried out to form a green phosphor stripe, a blue phosphor stripe and a red phosphor stripe. Then, the product is dried and is uniformly coated with an aqueous solution containing, for example, an acrylic resin (for example a resin sold under the trade name

PRIMAL). The product is again dried to form an acrylic resin-based film, which
is a so-called intermediate film on the phosphor stripes. Thereafter, a metal back layer is formed on the intermediate film by an aluminum vapor deposition
process and then the whole of the product is baked to remove the intermediate
film formed beneath the metal back layer. Thus, the process for manufacturing
a phosphor screen is ended.

Detailed Description Text - DETX (4):

Resin particles, for example, polyethylene particles (FIG. 3A) having an average particle size of 0.5 to 20 micrometers were mixed into an aqueous solution 1 containing a photosensitive resin made of ammonium bichromate or the
like, a dispersing agent such as a surface active agent or the like and a binder such as a polyvinyl alcohol or the like. Then, phosphor particles of a first color, for example, green phosphor particles 3 were added into the above-mentioned aqueous solution 1 with the green phosphor particles 3 and then
the solution was stirred for a few minutes, for example, 2 to 3 minutes to provide a suspension 4 (see FIG. 3A). Then, the suspension 4 was uniformly coated on the inner surface of a panel 6 (FIG. 3B) on which there were previously formed carbon stripes 5. After the drying process, the product was
exposed to light through an optical mask 7 (FIG. 3C), such as a color selection
electrode. After the exposing process, the product was developed by water to
form a green phosphor stripe 9G and so-called blank portions 8 formed between
predetermined carbon stripes 5 (see FIG. 3D). Similarly, phosphor stripes of second and third colors, for example, blue phosphor stripes 9B and red phosphor

stripes 9R were formed on the other blank portions 8 (see FIG. 3E).

US-PAT-NO: 5372903

DOCUMENT-IDENTIFIER: US 5372903 A

TITLE: Method of forming a phosphor layer on CRT panel and a water soluble emulsion with photosensitivity for an intermediate layer

---------- KWIC ---------

US Patent No. - PN (1):
5372903

Detailed Description Text - DETX (6):
Then, a phosphor slurry in which phosphor particles are mixed into a photosensitive binder, e.g., polyvinyl alcohol is uniformly coated on the inner surface of the panel 1 on which the carbon stripes 2 are formed and then exposed by ultraviolet rays by using the color selecting electrodes as masks, thereby the phosphors being optically cured in a stripe shape. Then, non-exposed portions are removed by the development treatment. This process is
carried out for each of red, green and blue phosphors, thereby forming respective color phosphor stripes 3 [3R. 3G, 3B] between the respective corresponding carbon stripes 2.